

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A peptide, that is either cyclized or branched, containing less than 50 amino acids, comprising at least one dimer of type XG, wherein X stands for an N^G-mono- or N^G-N^G-dimethylated arginine, ~~asymmetrical dimethyl arginine~~, or N^G-N^G-dimethylated arginine, ~~symmetrical dimethyl arginine~~, and said peptide is able to react with antibodies and with said methylation being crucial for the reaction between said peptide and said antibodies and wherein said antibodies are present in sera from patients with systemic lupus erythematosus (SLE).
- 2.-23. (Cancelled)
24. (Previously Presented) The peptide according to claim 1 comprising the amino acid sequence of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, or an analog of any of SEQ ID NOs: 1-15, wherein the analog has an amino acid sequence identical to the respective SEQ ID NO except that the analog comprises conservative amino acid substitutions at one or more positions, where the conservative amino acid substitutions are selected from the following: Thr, Gly, or Asn substituted for Ser; His, Lys, Glu, or Gln substituted for Arg; Ile, Met, Phe, Val, or Tyr substituted for Leu; Ala, Thr, or Gly substituted for Pro; Pro, Ser, Ala, Gly, His, or Gln substituted for Thr; Pro, Gly, or Thr substituted for Ala; Met, Ile, Tyr, Phe, or Leu substituted for Val; Ala, Thr, Pro, or Ser substituted for Gly; Met, Leu, Phe, Val, or Tyr substituted for Ile; Met, Tyr, Ile, Leu, Trp, or Val substituted for Phe; Phe, Trp, Met, Ile, Val, or Leu substituted for Tyr; Ser, Thr, or Met substituted for Cys; Gln, Arg, Lys, Glu, or Thr substituted for His;

Glu, His, Lys, Asn, Thr, or Arg substituted for Gln; Asp, Ser, or Gln substituted for Asn; Arg, Glu, Gln, or His substituted for Lys; Asn, Glu, or Gln substituted for Asp; Gln, Asp, Lys, Asn, His or Arg substituted for Glu; and Ile, Leu, Phe, or Val substituted for Met.

25. (Previously Presented) The peptide of claim 1 fused to a linker molecule.
26. (Previously Presented) A peptide comprising tandem repeats of at least two of any of the peptides of claim 1.
- 27.-34. (Cancelled)
35. (Previously presented) The peptide according to claim 1 wherein X stands for N^G-mono- or N^G-N^G-dimethylated arginine.
36. (Previously Presented) The peptide according to claim 1 comprising the amino acid sequence of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, or SEQ ID NO: 15
37. (New) The peptide according to claim 1 comprising the amino acid sequence (XG)₂₋₉.
38. (New) The peptide according to claim 1 comprising the amino acid sequence (XG)₄₋₉.
39. (New) The peptide according to claim 1 comprising the sequence (XG)₂ and at least one other XG separated from the (XG)₂ by one or more intervening amino acids.
40. (New) The peptide according to claim 1 that is longer than eight amino acids.
41. (New) The peptide according to claim 1 that is longer than ten amino acids.
42. (New) The peptide according to claim 1 that is branched.